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RA Abril J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C., Baldwin D.,
RA Ballew R.M., Basu A., Barkendale J., Bayraktaroglu L., Beasley E.M.,
RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P.,
RA Burtis K.C., Busam D.A., Butler H., Caddeu E., Center A., Chandra I.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA de Pablos B., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Fosler C., Gabrielian A.E., Garg N.S., Gelbart W.M., Glasser K.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Hostin D., Houston K.A., Howland T.J., Wei M.-H., Ibegvam C.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Lasko P., Lei Y., Levitsky A.A., Li J., Li Z., Liang Y., Lin X.,
RA Mount S.M., Moy M., Murphy B., Murphy L., Muzny D.M., Nelson D.L.,
RA Merkulov G., Milshina N.Y., Mobarry C., Morris J., Moshrefi A.,
RA Reinert K., Remington K., Saunders R.D.C., Scheeler F., Shen H.,
RA Spier E., Spradling A.C., Stapleton M., Skupski M.P., Smith T.,
RA Reinert K., Remington K., Saunders R.D.C., Scheeler F., Shen H.,
RA Svirskas R., Tector C., Turner R., Venter E., Wang A.H., Wang X.,
RA Wang Z.-Y., Wassarman D.A., Weinstock G.M., Weissenbach J.,
RA Yelliams S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A.,
RA Yelliams S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A.,
RA Cibbs R.A., Myers E.W., Rubin G.M., Yenter J., Shith H.O.,
RA Gibbs R.A., Myers E.W., Rubin G.M., Venter J.C.,
RT The genome sequence of Drosophila melanogaster.";
                                                                                                                                                                                                             EMBL; X03758; CAA27391.1; -. EMBL; K02314; AAA28681.1; -. EMBL; M27708; AAA28684.1; -. EMBL; M69015; AAB41334.1; -. EMBL; AE003684; AAF54452.1; -PIR; A03285; SMFF. PIR; A03285; SMFF. PIR; A05294.
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Polymorphism
                                                             PFAM; PF02067; Metallothio_5; 1. PRINTS; PR00872; MTDIPTERA.
                                                                                                                                                         FLYBASE; FBgn0002868;
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Metallothionein Mto gene of Drosophila
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                             Chelation; Copper; Cadmium;
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INDUCED BY CADMIUM, COPPER AND MERCURY
YSTEINE RESIDUES ARE ARRANCED IN C-X-C
BE THE METAL-BINDING SITES IN OTHER
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01-AUG-1991 (Rel. 1
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          EMBL; M55407;
EMBL; M69016;
EMBL; S75822;
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P22254;
                                                                                                                                                                                                                                                                                                           Stephan W., Rodriguez V.S., Zhou B., Parsch J.;
"Molecular evolution of the metallothionein gene Mtn in
melanogaster species group: results from Drosophila anan
Genetlcs 138:135-143(1994).
-1- FUNCTION: THIS PROTEIN BINDS CATIONS OF SEVERAL TRAN
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                                                               modified and this statement is not removed. entities requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                          the European Bioinformatics Institute. There are no restrictions use by non-profit institutions as long as its content is in
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Lange B.W., Langley C.H., Stephan W.H.;
"Molecular evolution of Drosophila metallothionein genes.";
Genetics 126:921-932(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Drosophila simulans (Fruit fly), and Drosophi
Eukaryota; Metazoa; Arthropoda; Tracheata; He
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MEDLINE=95095041; PubMed=8001781;
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Theodore L., Ho A.-S., Maroni G.;
TRecent evolutionary history of the metallothionein gene Mtn
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                                                                                                                                                                                               METALLOTHIONEINS.
SIMILARITY: THE TWO
ONLY 26% SIMILAR.
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                                                                                                                                                                                  SIMILARITY: BELONGS TO FAMILY 5 IN METALLOTHIONEIN SUPERFAMILY
                                                                                                                                       SWISS-PROT entry is copyright. It is produced through a collaboration sen the Swiss Institute of Bioinformatics and the EMBL outstation -
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                                                                                                                                                                                                                                                                                                                                                        Drosophila ananassae.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1; Length 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hexapoda; Insecta
a; Brachycera; Mus
                                                                                http://www.isb-sib
                                                                                                                                                                                                                                                                                                                               SEVERAL TRANSITION
                                                                                               Usage
                                                                                                                                                                                                                                                                                                                DETOXIFICATION
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                                                                                .ch/announce/
                                                                                                                                                                                                                                                       GROUPS
                                                                                             commercial
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RESULT

MT2_DNME

ID MT2_D

AC P1195

D1 O1-OC

DT O1-OC

DT O1-OC

DT O1-OC

DE WATNA

GN MTNA

GN METAL

GN MTNA

GN METAL

RN ETAL

RN MEDLI

RN GLOR

RN BERN

RN BERN
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Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
AR Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
AR Amanatides P.G., Scherer S.E., Richards S., Ashburner M., Henderson S.N.,
AR George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
AR George R.A., Lewis S.E., Yandell M.D., Zhang Q., Chen L.X.,
AR Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
AR Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
AR Berandon R.C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
AR Bellew R.M., Basu A., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
AR Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
AR Beeson K.Y., Benos P.V., Berman B.P., Banddari D., Bolshakov S.,
AR Berkova D., Botchan M.R., Bouck J., Brokstein P., Brottler P.,
AR Burtis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,
AR Cherry J.M., Cawley S., Dahlke C., Davenportt L.B., Davies P.,
AR Cherry J.M., Cawley S., Dahlke C., Davenportt L.B., Davies P.,
AR Cherry J.M., Cawley S., Dahlke C., Davenportt L.B., Davies P.,
AR Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
AR Douston K.J., Evangelista C.C., Ferraz C., Ferraz S., Fleischmann W.,
AR Posler C., Gabrielian A.E., Garg N.S., Gelbart W.M., Glasser K.,
AR Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
AR Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
ARA Jalali M., Kalush F., Karpen G.H., Ke Z., Kennison J.A., Ketchum K.A.,
ARA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
STRAIN-BERKELEY;
MEDLINE=20196006; PubMed=10731132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN-OREGON-R,
MEDLINE-91012582; PubMed=1976815;
MEDLINE-91012582; PubMed=1976815;
Silar P., Theodore L., Mokdad R., Erraiss N.-E., Cadic A., Wegnez
Silar P., Theodore L., Mokdad R., Erraiss N.-E., Cadic A., Wegnez
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Silar P., Theodore L., Mok "Metallothionein Mto gene regulation.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRINTS; PR00872; MTDIPTERA.
Metal-binding; Chelation; C
SEQUENCE 40 AA; 3852 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A. STRAIN=OREGON-R;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota;
Pterygota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PFAM; PF02067; Metallothio_5; 1.
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FLYBASE; FBgn0013782; Dana\MtnA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       system."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Metallothionein genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=87204190; PubMed=3106973; Mokdad R., Debec A., Wegnez M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Drosophila melanogaster (Fruit fly)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MTNB OR MTO.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Natl. Acad. Sci. U.S.A. 84:2658-2662(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Biol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Neoptera; Endopterygota; Dip
; Drosophilidae; Drosophila
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      215:217-224(1990).
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18.2%;
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W; 9182A53CCCAE634A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3-27
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                43
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Brachycera; Muscomorpha;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
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A Mount S.M., Moy M., Murphy B., Murphy L., Muzny D.M., Nelson D.L.,
A Mount S.M., Moy M., Murphy B., Murphy L., Muzny D.M., Nelson D.L.,
A Nelson D.R., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
A Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
A Reinert K., Remington K., Saunders R.D.C., Scheeler F., Shen H.,
A Reinert K., Remington K., Saunders R.D.C., Scheeler F., Shen H.,
A Reinert K., Remington K., Saunders R.D.C., Scheeler F., Shen H.,
A Spier E., Spradling A.C., Stapleton M., Skupski M.P., Smith T.,
A Spier E., Spradling A.C., Stapleton M., Strong R., Sun E.,
A Spier E., Spradling A.C., Turner R., Venter E., Wang A.H., Wang X.,
A Spier E., Wassarman D.A., Weinstock G.M., Weissenbach J.,
A Svirskas R., Tector C., Turner R., Venter E., Wang A.H., Wang X.,
A Swilliams S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A.,
A Williams S.M., Woodage T., Weinstock G.M., Vensebach J.,
A Ye J., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zheng L.,
A Ye J., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zheng L.,
A Ye J., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zheng L.,
A Ye J., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zheng L.,
A Ye J., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zheng L.,
A Ye J., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zheng L.,
A Ye J., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zheng J.,
A Ye J., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zheng J.,
A Ye J., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zheng J.,
A Ye J., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zheng J.,
A Ye J., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zheng J.,
A Ye J., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zheng J.,
A Ye J., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zheng J.,
A Ye J., Ye J., Yeh R.-F., Zhong H., Zhan M., Zhang G., Zhao Q., Zheng J.,
A Ye J., Ye J., Zhong J., Zhan M., Zhang J., Zhan M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
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                                                                                       AGRP_LUFCY STANDARD; PRT; 4/ AA.
P56568;
P56568;
15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
6.5 KDA ARGININE/GLUTAMATE-RICH POLYPEPTLDE (6).
6.5 KDA ARGININE/GLUTAMATE-RICH POLYPEPTLDE (7).
Luffa cylindrica (Smooth loofah) (Sponge gourd).
Eukaryota; Viridiplantae; Embryophyta; Tracheophyta; Spermatophyta;
Eukaryota; Viridiplantae; core eudicots; Rosidae; eurosids I;
                                                                                                                                                                                                                                                                                                         LT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRINTS; PRO0872; MTDIPTERA.
Metal-binding; Chelation; Copper; Cadmium; Zinc.
SEQUENCE 43 AA; 4525 MW; SEEOCF9171BD9A97 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PIR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; M16250; AAA28683.1; -. EMBL; X52098; CAA36318.1; -. EMBL; AE003730; AAF55768.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Bithe European Bioinformatics Institute. There are no restructed by non-profit institutions as long as its content modified and this statement is not removed. Usage by and
                                                                         Cucurbitales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PFAM; PF02067; Metallothio_5; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FLYBASE; FBgn0002869; MtnB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Liu X., Mattei B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -!- SIMILARITY: THE TWO DROSOPHILA METALLOTHIONEINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -!- DEVELOPMENTAL STAGE:
                                                                                                                                                                                                                                                                                                                                                                                                        6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INDUCTION: STRONGLY INDUCED BY CADMIUM, COMISCELLANEOUS: ALL CYSTEINE RESIDUES ARE ITHESE ARE THOUGHT TO BE THE METAL-BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIMILARITY: BELONGS TO FAMILY 5 IN METALLOTHIONEIN SUPERFAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ONLY 26% SIMILAR
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LARVAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S14706; SMFF2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity 18.3
4; Conservative
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RESULT 5

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DE ENAALE S
GN MST84D
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Adams M.D., Ceiniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
RA Annanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
RA Manatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA George R.A., Lewis S.E., Richards S., Danyg Q., Chen L.X.,
RA Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
RA Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X.,
RA Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
RA Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
RA Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
RA Wan K.H., Boyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
RA Ballew R.M., Bayan A., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.,
RA Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottler P.,
RA Burtis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,
RA Geeson K.Y., Denos P.V., Berman B.P., Bhandari D., Bolishakov S.,
RA Gerry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Gerry J.M., Cawley S., Dahlke C., Davenport L.B., Dew I., Dietz S.M.,
RA Gerry J.M., Cawley S., Dahlke C., Davenport L.B., Dew I., Dietz S.M.,
RA Gerry J.M., Cawley S., Dahlke C., Perriera S., Fleischmann W.,
RA Gerry J.M., Cawley S., Dahlke C., Ferriera S., Fleischmann W.,
RA Godson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Gelbart W.M., Glasser K.,
RA Hostin D., Harvey D., Helman T.J., Hernandez J.R., Houck J.,
RA Lasko P., Lei Y., Levitsky A.A., Li J., Liang Y., Lin X.,
RA Lasko P., Lei Y., Levitsky A.A., Li J., Liang Y., Lin X.,
Liu X., Mattei B., McIntosh T.C., McLeod M.P., McPherson D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local S
Matches 4
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Kimura M., Park S.S., Sakai R., Yamasaki N., Funatsu G.
Primary structure of 6.5k-arginine/glutamate-rich poly
the seeds of sponge gourd (Luffa cylindrica).";
Biosci. Biotechnol. Biochem. 61:984-988(1997).
-i- FUNCTION: STORAGE PROTEIN WHICH PROVIDES NITROGEN.
RESERVES DURING GERMINATION AND SEEDLING GROWTH.
-i- MASS SPECTROMETRY: MW-5693.39; METHOD=MALDI.
-i- SIMILARITY: SOME, TO 7S SEED STORAGE PROTEINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        M84C_DROME STANDARD; PRT; 55 AA. Q01644; Q9VIAO; 01-JUL-1993 (Rel. 26, Created) 01-JUL-1993 (Rel. 26, Last sequence update) 01-OCT-2000 (Rel. 40, Last annotation update) MALE SPECIFIC SPERM PROTEIN MST84DC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DISULFID DISULFID
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of Drosophila
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MST84DC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Drosophila
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LFID 12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  35:143-151(1991).
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29
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18;
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RA Nelson D.R., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA Reinert K., Remington K., Saunders R.D.C., Scheeler F., Shen H.,
RA Shue B.C., Siden-Kiamos I., Simpson M., Skupski M.P., Smith T.,
RA Spier E., Spradling A.C., Stapleton M., Skupski M.P., Smith T.,
RA Sylirskas R., Tector C., Turner R., Venter E., Wang A.H., Wang X.,
RA Wang Z.-Y., Wassarman D.A., Weinstock G.M., Weissenbach J.,
RA Williams S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A.,
RA Williams S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A.,
RA Zheng X.H., Zhong F.N., Zhong W., Zhou X., Zhu S., Zhu X., Smith H.O.,
RA Gibbs R.A., Myers E.W., Rubin G.M., Venter J.C.;
RI Tibe genome sequence of Drosophila melanogaster.";
CC -!- TISSUE SPECIFICITY: TESTIS.
CC -!- DOMAIN: THIS PROTEIN IS MOSTLY COMPOSED OF REDETITIVE C-G-P
LOMAIN: THIS PROTEIN IS MOSTLY COMPOSED OF REDETITIVE C-G-P
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21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
METALLOTHIONEIN-II (MT-II).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL;
                                                                                                                                                                                                              J. Biol. Chem. 257:2420-2426(1982)
                                                                                                                                                                                                                                                                                                                       MEDLINE=82142340; PubMed=7061431;
                                                                                                                                                                                                                                                                                                                                                                                                    Eumalacostraca; Eucarida; Decapoda; P. Eubrachyura; Portunoidea; Portunidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scylla serrata (Mud crab).
Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Spermatogenesis; Repeat; Mu SEQUENCE 55 AA; 5225 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Enthe European Bioinformatics Institute. There are no restricted the state of the state
                           HSSP; P55949; 1DMF
                                                                                                                                                                                                                                                                "Crab metallothionein. Primary structures
                                                                                                                                                                                                                                                                                           Lerch K., Ammer D.,
                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FLYBASE; FBgn0004174; Mst84Dc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          or send an email to license@isb-sib.ch).
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[NTERPRO;
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                                                                                                                           FUNCTION: METALLOTHIONEINS HAVE A HIGH CONTENT
RESIDUES THAT BIND VARIOUS HEAVY METALS. CLASS
CRUSTACEA ARE INVOLVED IN THE SEQUESTRATION OF
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SIMILARITY: BELONGS TO THE MST(3)CGP FAMILY.
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                                                                                                   OF HEAVY-METAL IONS
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AE003672; AAF540
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IPR002045;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
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                                                                                                                                                                                                                                                                                        Olafson
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                                                                       FAMILY 3 IN METALLOTHIONEIN SUPERFAMILY
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                                                                                                                                                                                                                                                                                           R.W.
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95A12F3AEC88BD6C CRC64;
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ELEVATED LEVELS
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RESULT 7
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Best Local
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SEQUENCE
                                                                                                  STRUCTURE BY NMR.

MEDLINE-94318629; PubMed-8043573;

MEDLINE-94318629; PubMed-8043573;

Zhu Z., Derose E.F., Mullen G.P., Petering D.

"Sequential proton resonance assignments and of lobster metallothionein-1.";
                                                                                                                                                                 TISSUE=HERATOPANCREAS;

MEDLINE=89215793; PubMed=2709004;

Brouwer M., Winge D.R., Gray W.R.;

"Structural and functional diversity of copper-metallothioneins the American lobster Homarus americanus.";
                                                                                                                                                                                                                                                                    01-APR-1993 (Rel. 25, Created)
01-NOV-1997 (Rel. 35, Last sequence up
01-NOV-1997 (Rel. 35, Last annotation
METALLOTHIONEIN-1 (CUMT-1).
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                    PIR;
                                                                         Biochemistry 33:8858-8865(1994).
-!- FUNCTION: METALLOTHIONEINS HAVE RESIDUES THAT BIND VARIOUS HEAVY
                                                                                                                                                                                                                                          Homarus americanus (American lobster)
Eukaryota; Metazoa; Arthropoda; Crusti
Eumalacostraca; Eucarida; Decapoda; P
                                                                                                                                                                                                                                                                                                         P29499;
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Metal-binding;
  INTERPRO;
                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                          Nephropoidea; Nephropidae; Homarus.
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           SIMILARITY: BELONGS; A37039; A37039; A37039.
P; P55949; 1DMF.
                                            FUNCTION: METALLOTHIONEINS HAVE A HIGH CONTENT OF CYSTEINE RESIDUES THAT BIND VARIOUS HEAVY METALS. THE DIFFERENT FORMS OF LOBSTER METALLOTHIONEINS MAY HAVE DIFFERENT BIOLOGICAL FUNCTIONS. CLASS I MTS IN MARINE CRUSTACEA ARE INVOLVED IN THE SEQUESTRATION OF ELEVATED LEVELS OF HEAVY-METAL IONS. BINDS 6 METAL IONS. KNOWN
                                      TO BIND CADMIUM
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   IPR002045; -.
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on update)
                             IN METALLOTHIONEIN SUPERFAMILY
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HSSP; P55949; 1DMF.
                                                                                                                                                          J. Biol. Chem.
                                                                                                                                                                                                                                Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca; Eumalacostraca; Eucarida; Decapoda; Pleocyemata; Brachyu Eubrachyura; Portunoidea; Portunidae; Scylla.
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                                                                PRINTS;
                                                                           PFAM;
                                                                                 INTERPRO; IPRO02045; -
INTERPRO; IPRO03019; -
                                                                                                                                                                                                               SEQUENCE
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PFAM; PF00131; metalt
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                                                                                                                                      FUNCTION: METALLOTHIONEINS RESIDUES THAT BIND VARIOUS CRUSTACEA ARE INVOLVED IN T
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                                                                                                                              OF HEAVY-METAL TONS.
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                                                                           PF00131;
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                                                        Metal-thiolate
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METALLOTHIONEINS HAVE A HIGH CONTENT
HAT BIND VARIOUS HEAVY METALS, CLASS
ARE INVOLVED IN THE SEQUESTRATION OF
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DT O1-NOV-1997 (Rel. 35, Created)
DT O1-NOV-1997 (Rel. 35, Last sequence update)
DT O1-NOV-1997 (Rel. 35, Last sequence update)
DT O1-NOV-1997 (Rel. 35, Last annotation update)
DT METALLOTHIONEIN-II (MT-II) (MT-IIB/MT-IIA).
OS Callinectes sapidus (Blue crab).
OC Enkaryota; Metazoa; Arthropoda; Crustacea; Malacostraca;
Cumalacostraca; Eucarida; Decapoda; Pleocyemata; Brachyura;
Thrachyura; Portunoidea; Portunidae; Callinectes.
 RESULT STATE AND CONTROL OF THE PRIVATE AND CONT
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Metal-binding;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=96033062; PubMed=7487904; Brouwer M., Enghild J., Hoexum-Br
                                                                                                                                                                                                                                                                                                                                                INTERPRO; IPR002045;
                                                                                                                                                                                                                                                                                                                                                                HSSP; P55949; 1DMD
                                                                                                                                                                                                                                                                                                                                                                                                                        Brouwer M., Enghild J., Hoexum-Brouwer Primary structure and tissue-specific (Callinectes sapidus) metallothionein i Biochem. J. 311:617-622(1995).
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                                                                                                                                                                                                                                                                                                    PR00858;
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llarity 18.2%;
Conservative 1
   ĀΑ;
                                                                                                                                                                                                                                                                                                    metalthio; 1.
8; MTCRUSTACEAN.
                                                                                                                                                                                                                                                                                      Metal-thiolate
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                                                                                                                                                                                                                                                                                                                                                                              FAMILY 3
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CLUSTER B.
CLUSTER B.
CLUSTER B.
CLUSTER A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 54; DB
Pred. No. 49;
L8; Mismatches
CLUSTER
                                                                                                                                                                                                                                                         BETA.
ALPHA
                                                                                                                                                                                                                                                                                      cluster;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          e 54; L
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                                                                                                                                                                                                                                                                                                                                                                                                                               or T., Thogers
or expression
or isoforms.";
                                                                                                                                                                                                                                                                                      Chelation;
                                                                                                                                                                                                                                                                                                                                                                            METALLOTHIONEIN SUPERFAMILY
                                                                                                                                                                                                                                                                                                                                                                                                          IONS. KNOWN TO BIND COPPER AND
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Brachyura;
                                                                                                                                                                                                                                                                                     Copper;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                     blue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Truncali A.;
                                                                                                                                                                                                                                                                                        Cadmium
                                                                                                                                                                                                                                                                                                                                                                                                                                                     crab
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RESULT NET TO SEE AND 
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Matches 4
                                                   DOMAIN
METAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pedersen S.N., Pedersen K.L., Hoejrup P., Depledge M.H., Kni "Primary structures of decapod crustacean metallothioneins v special emphasis on freshwater and semi-terrestrial species Biochem. J. 319:999-1003(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        METAL
VARIANT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MT_ASTFL STANDARD; PRT; 58 AA.
p55951;
01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
01-NOV-1997 (Rel. 35, Last annotation update)
METALLOTHIONEIN (MT).
Astracus fluvlatilis (Broad-fingered crayfish) (Astacus astac Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca; Eucarida; Decapoda; Pleocyemata; Astacidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          -!- INDUCTION: BY CAUPLUS.
-!- MASS SPECTROMETRY: MW=5910.8;
-!- SIMILARITY: BELONGS TO FAMILY
HSSP; P55949; 1DMD.
   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                    PRINTS; PR0085
Metal-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                       INTERPRO; IPRO02045;
INTERPRO; IPRO03019;
PFAM; PF00131; metalt
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Astacoidea; Astacidae; Astacus.
[1]
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                                    /ARIANT
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RESIDUES THAT BIND VARIOUS HEAVY METALS. CLASS
ARE INVOLVED IN THE SEQUESTRATION OF ELEVATED I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         METAL IONS.
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                                                                                                                                                                                                                                                                                                                                                                                      PR00858; MTCRUSTACEAN inding; Metal-thiolate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity 18.: 4; Conservative
   58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          83
                                    AA;
                                                                                                                                                                                                                                                                                                                                                                                                                     metalthio;
   5911
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6287
                                     (Broad-fingered crayfish) (Astacus astacus). Arthropoda; Crustacea; Malacostraca;
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18.2
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CLUSTER A.
CLUSTER A.
MISSING (IN VARIANT ISOL
CADMIUM CONCENTRATION).
576365B3EE5C7122 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         38
                                                                                  ALPHA.
CLUSTER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 54
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                       BETA
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MISSING (IN MT-IIA).
EF679CB94975C5F0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                    cluster;
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3 IN METALLO
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                                                                                                                                    Chelation;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         METALLOTHIONEIN SUPERFAMILY
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                                    ISOLATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     T OF CYSTEINE
S I MTS IN CRUSTACEA
LEVELS OF HEAVY-
                                                                                                                                                                                                                                                                                                                                                                                        Cadmium
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Query Match

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MT_CAR
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Matches
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Best Local
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DOMAIN 1
DOMAIN 30
METAL 5
METAL 6
METAL 10
METAL 12
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P55948;
01-NOV-1997 (Rel.
01-NOV-1997 (Rel.
15-JUL-1998 (Rel.
                                                                                                                                                                   METAL
METAL
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METAL
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"Purification and characterization of a cadmium-induced metallothionein from the shore crab Carcinus maenas (L.) Biochem. J. 297:609-614(1994).
                                                                                                                                                                                                                                                                                                        METAL
                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE=MIDGUT;
MEDLINE=94153337; PubMed=8110201;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Arthropoda; Crustacea; Malaco
Eumalacostraca; Eucarida; Decapoda; Pleocyemata;
                                                                                                                                                                                                                                                                METAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRINTS; PR00858;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INTERPRO; IPRO02045; -
INTERPRO; IPRO03019; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eubrachyura;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        METALLOTHIONEIN
  17
                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11
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                             \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OF HEAVY-METAL IONS.
INDUCTION: BY CADMIUM.
SIMILARITY: BELONGS TO FAMILY
P. F55949; IDMD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FUNCTION: METALLOTHIONEINS HAVE A HIGH CONTENT
RESIDUES THAT BIND VARIOUS HEAVY METALS. CLASS
CRUSTACEA ARE INVOLVED IN THE SEQUESTRATION OF
  CKAGCKCTSCRCTPCEKCSSGC
                            CXXXCXXXXXXXXXXXXXX 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CKTGCVCTSCRCSPCDKCTSGC
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                                                        4;
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4; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (Rel. 35, Last sequence up (Rel. 35, Last sequence up (Rel. 36, Last annotation
                                                        Conservative
                                                                                                                                                                   Portunoidea; Portunidae; Carcinus.
                                                                                                                                                                                                                                                                                                                                                                                                                                              Metal-thiolate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (Common shore crab)
                                                                                                                                                                                                                                                                                                                                                                                                                                                          MTCRUSTACEAN.
                                                                                                                           6133
                                                                                                                                                     100.
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                                                                     Pred.
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CLUSTER
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8; Mismatches
                                                                                                                         MISSING (IN VARIANT ISOLATED IN CADMIUM CONCENTRATION).
0167CDA2E9C9731D CRC64;
                                                                                                                                                                                                                                     CLUSTER
                                                                                                                                                                                                                                                                                                                                                                                                                               BETA
                                                                                                                                                                                                                                                                                                                                                                                                                    ALPHA
                                                                                                                                                                                                                                                                                                                                                                                                                                           cluster;
                                                                                  Score
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                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Crustacea; Malacostraca;
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                                                                     No
                                                                               54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (Green crab).
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                                                                                                                                                                                                                                                                                                                                                                                                                                            Chelation; Cadmium
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                                                                                  DB
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                                                       Indels
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S I MTS IN MAR
ELEVATED LEV
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LEVELS
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RESULT 13
MT1_CALSI
ID MT1_CALSI
AC P55949;
DT 01-NOV-1997
DT 01-NOV-1997
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Best Local S
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SEQUENCE
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                                                                                                                                                                                                                                   58
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Eukaryota; Metazoa; Arthropoda; Crustacea; Malacostraca; Eumalacostraca; Eucarida; Decapoda; Pleocyemata; Brachyu Eubrachyura; Portunoidea; Geryonidae; Potamon.
                                                                                                                                                                                                                                                                                                                                                                                                                                       Biochem. J. 319:999-1003(1996).

-I- FUNCTION: METALLOTHIONEINS HAVE A HIGH CONTENT OF CYSTEINE
-I- FUNCTION: METALLOTHIONEINS HEAVY METALS. CLASS I MTS IN CRUSTACEA
ARE INVOLVED IN THE SEQUESTRATION OF ELEVATED LEVELS OF HEAVY-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pedersen S.N., Pedersen K.L., Hoejrup P., Depledge M.H., Knudse "Primary structures of decapod crustacean metallothioneins with special emphasis on freshwater and semi-terrestrial species.";
CKAGCKCTSCRCSPCEKCTSEC
                    CXXXCXXXXXXXXXXXXXXXX
                                           Similarity 4; Conser
                                           Conservative
                                                                                                6157
                                                                                                           100.
                                                                                                MW;
                                                    .2%;
                                                              .0%;
                                           18;
                                                                                            CLUSTER B.
CLUSTER A.
 38
                     22
                                        Pred. No. 49;
8; Mismatches
                                                              Score 54;
                                                                                                                                                                                                                                                                                                                                                                                             METHOD=MALDI.
3 IN METALLOTHIONEIN SUPERFAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             update)
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                                                                                                                                                                                                                                                                                                                              Chelation;
                                                                DB 1;
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                                                                                               CRC64;
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                                                              Length 58;
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                                        Gaps
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35, Created)
35, Last sequence

update)

PRT;

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RESULT 14
MT1B_HUMAN
ID MT1B_H
AC P07438
DT 01-APR
DT 01-APR
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     MT1B_HUMAN
P07438;
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VARIANT
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Biochemistry 34:620-631(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Callinectes sapidus (Blue crab).
Eukaryota; Metazoa; Arthropoda; Crusta
Eumalacostraca; Eucarida; Decapoda; Pl
Eubrachyura; Portunoidea; Portunidae;
                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRINTS; PR00858; MTCRUSTACEAN Metal-binding; Metal-thiolate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=95119049; PubMed=7819257; Narula S.S., Brouwer M., Hua Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Brouwer M.,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-NOV-1997 (Rel. 35, Last annotation update) METALLOTHIONEIN-I (MT-I) (MT-IB/MT-IA)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PFAM; PF00131;
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                                                                                                                                                            17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; 1DMC; 07-FEB-95.
; 1DMD; 07-FEB-95.
; 1DME; 07-FEB-95.
; 1DMF; 07-FEB-95.
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4; Conserv
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     (Rel.
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                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                        AA;
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Decapoda; Pleocyemata; Brachyu
                                                                                                                                                                                                                                   18;
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3; Mismatches
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MISSING (IN·MT-IA).
4398B0A9DlA96D34 CRC64;
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blue crab
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     metallothionein IB gene.";
Mol. Cell. Biol. 6:2149-2157(1986)
-!- FUNCTION: METALLOTHIONEINS HAV
                                                                                                                                                                                                                                                                                                           Cadmium;
                                                                                                                                                                                                                                                                                                                     PROSITE; PS002
Metal-binding;
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EMBL; M13484;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=87064506; PubMed=3785191;
Heguy A., West A., Richards R.I., Karin M.
"Structure and tissue-specific expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ייי (Kel. 35, Last annotation update)
METALLOTHIONEIN-IB (MT-1B).
עמייט
                                                                                                                                                                                                                                                                                                                                                                       INTERPRO;
                                                                                                                                                                                                                                                                                                                                                                                  (NTERPRO;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FUNCTION: METALLOTHIONEINS HAVE A HIGH CONTENT OF CYSTEINE RESIDUES THAT BIND VARIOUS HEAVY METALS; THESE PROTEINS ARE TRANSCRIPTIONALLY REGULATED BY BOTH HEAVY METALS AND GLUCOCORTICOIDS.

SUBUNIT: MONOMER.

SUBUNIT: MONOMER.

FOUR DIVALENT IONS ARE CHELATED WITHIN CLUSTER A OF THE ALPHA DOMAIN AND ARE COORDINATED VIA CYSTEINYL THIOLATE BRIDGES TO 11 CYSTEINE LIGANDS. CLUSTER B, THE CORRESPONDING REGION WITHIN THE BETA DOMAIN, CAN LIGATE THREE DIVALENT IONS TO 9 CYSTEINES.

SIBILARITY: BELLONGS TO FAMILY 1 IN METALLOTHIONEIN SUPERFAMILY.
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                                                                                                                                                                                                                                                                                                                                             PR00860; MTVERTEBRATE
                                                                                                                                                                                                                                                                                                                    PS00203; METALLOTHIONEIN_VRT; nding; Metal-thiolate cluster;
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Chelation; Zinc; Copper;
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RA Adams N.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
RA Adams N.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
RA Adams N.D., Celniker S.E., Holt R.A., Evans C.A., Golle R.F.,
RA Adams N.D., Celniker S.E., Kichards S., Ashburner M., Henderson S.N.,
RA Burdon R.C., Rogers Y.H.C., Blazej R.G., Champe M., Pfelffer B.D.,
RA Ballew R.M., Basu A., Baxendale J., Byraktaroglu L.D., Beasley E.M.,
RA Ballew R.M., Basu A., Baxendale J., Byraktaroglu L., Beasley E.M.,
RA Ballew R.M., Basu A., Baxendale J., Byraktaroglu L., Beasley E.M.,
RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottler P.,
RA Borstein P., Botchan M.R., Bouck J., Brokstein P., Brottler P.,
RA Borstein D., Botchan A., Deng Z., Mays A.D., Dew I. Dietz S.M.,
Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Dunkov B.C., Dunn P.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Harris N.L., Harvey D., Helman T.J., Hernandez J.R., Houck J.,
RA Harris N.L., Harvey D., Krapt C., Kravitz S., Kulp D., Lai Z.,
RA Harris N.L., Harvey D., Krapt C., Kravitz S., Kulp D., Lai Z.,
RA Harris N.L., Harvey D., Krapt C., Kravitz S., Kulp D., Lai Z.,
RA Harris N.L., Harvey D., Krapt C., Kravitz S., Kulp D., Lai Z.,
RA Hount S.M., Moy M., Murphy B., Murphy L., Muzpy D.M., Nelson D.L.,
RA Melson D.R., Nelson K.A., Nixon K., Nusskern D.R., Pecleb J.M.,
RA Melson D.R., Nelson K.A., Simpson M., Skupski M.P., Shith T.,
RA Spier E., Spradling A.C., Stapleton M., Strong R., Sinth T.,
RA Spier E., Spradling A.C., Stapleton M., Strong R., Sinth T.,
RA Shue B.C., Siden-Kiamos I., Simpson M., Skupski M.P., Snith T.,
RA Shue B.C., Siden-Kiamos I., Simpson M., Skupski M.P., Snith T.,
RA Shue S.M., Wester E., Wang S., Yao O.A.,
Wenter D. Staples Specific C. Perist S. E.
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01-JUL-1993 (Rel. 26, Created)
01-JUL-1993 (Rel. 26, Last anguence update)
01-OCT-2000 (Rel. 40, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
STRAIN=OREGON-R;
MEDLINE=92102953; PubMed=1684716;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "A cluster of four genes selectively expressed in the male germ line
of Drosophila melanogaster.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Arthropoda; Tracheata; Hexapoda; Insecta;
Endopterygota; Diptera; Brachycera; Muscomorpha;
PRIMARY SPERMATOCYTES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18;
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Best Local Similarity
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                                                                                                                                                            Spermatogenesis; Repeat; Multigene SEQUENCE 63 AA; 5806 MW; BF84CD
                                                                                                                                                                                                FLYBASE; FBgn0004172; Mst84Da.
                                                                                                                                                                                                                                                                                                                                                                                                                                  -!- DOMAIN: THIS PROTEIN IS MOSTLY COMPOSED OF REPETITIVE C-G-P MOTIFS.
-!- SIMILARITY: BELONGS TO THE MST(3)CGP FAMILY.
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CGPCCGGCGPCCGPCGGCGPCC 50
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18.2%; Pred. No. 52
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BF84CD74CBCEFD3F CRC64;
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